Amendments of the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) An article of ~~Light-storage~~ light-storage self-luminescent glass, comprising:

from 0.01% to 40% by weight of a light-storage self-luminescent material activated by multiple ions; and

from 99.99% to 60% by weight of a matrix glass, wherein, during a forming process of the article of self-luminescent glass, the matrix glass is melted and the self-luminescent material is doped into the melted matrix glass to form the article;

wherein the article of self-luminescent glass is selected from the group consisting of a hollow glass article, a laminated glass article, and a stripped-luminescent glass article;

wherein a luminescent color of the article of self-luminescent glass is selected from the group consisting of red, orange-red, yellow-green, blue-green, blue and purple; and

wherein the light-storage self-luminescent material has a particle size from ~~0.8 mm~~ 10 μm to 20 mm~~, and the matrix glass is selected from the group consisting of sodium-calcium-silicon glass, borate glass, phosphate glass, halide glass, sulfide glass and aluminate glass~~.

2. (currently amended) An article of ~~Light-storage~~ light-storage self-luminescent glass according to claim 1, wherein:

the article of self-luminescent glass is the hollow glass article, wherein the hollow glass article is sealed and has a pre-defined shape; and

the light-storage self-luminescent material is uniformly attached to an inner wall of the sealed hollow glass article ~~chemical formula of the light-storage self-luminescent material activated by multiple ions is:~~

~~$\alpha MO \cdot \beta M'O \cdot \gamma SiO_2 \cdot \delta R:Eu_xLn_y$~~

~~wherein M is one or more selected from the group consisting of Sr, Ca, Ba and Zn;~~

~~M' is one or more selected from the group consisting of Mg, Cd and Be;~~

~~R is B_2O_3, P_2O_5 or mixture thereof;~~

~~Ln is one or more selected from the group consisting of Nd, Dy, Ho, Tm, La, Pr, Tb, Ce, Er, Mn, Bi, Sn and Sb; and~~

~~α, β, γ, δ, x and y are molar coefficients meeting following requirement: $0.6 \leq \alpha \leq 6$; $0 \leq \beta \leq 5$; $1 \leq \gamma \leq 9$; $0 \leq \delta \leq 0.7$; $0.00001 \leq x \leq 0.2$; $0 \leq y \leq 0.3$~~.

3. (currently amended) An article of ~~Light-storage~~ light-storage self-luminescent glass according to claim [[2]] 1, wherein:

the article of self-luminescent glass is the laminated glass article, wherein the laminated glass article comprises top, middle and bottom layers, wherein the matrix glass is positioned along the top and bottom layers, wherein the laminated glass article has a pre-defined shape; and

the light-storage self-luminescent material is positioned within the middle layer between the top and bottom layers ~~chemical formula of the light-storage self-~~

~~luminescent material activated by multiple ions is:~~

~~$(Sr_{1-z}Ca_z)_2MgSi_2O_7:Eu_xLn_y$~~

~~wherein Ln is one or more selected from the group consisting of La, Ce, Dy, Tm, Ho, Nd, Er, Sb and Bi;~~

~~z is a coefficient: $0 \leq z \leq 1$; and~~

~~x and y are molar coefficients: $0.0001 \leq x \leq 0.2$; $0.0001 \leq y \leq 3.0$~~.

4. (currently amended) An article of ~~Light-storage~~ light-storage self-luminescent glass according to claim 1, wherein:

the article of self-luminescent glass is the stripped-luminescent glass article, wherein the stripped-luminescent glass article has a pre-defined shape; and

the light-storage self-luminescent material is uniformly distributed as strips in a glass wall of the stripped-luminescent glass article ~~chemical formula of the light-storage self-luminescent material activated by multiple ions is:~~

~~$(Ca_{1-z}Sr_z)S:Eu_xLn_y$~~

~~wherein Ln is one or more selected from the group consisting of Er, Dy, La, Tm and Y;~~

~~z is a coefficient: $0 \leq z \leq 1$; and~~

~~x and y are molar coefficients meeting following requirement: $0.00001 \leq x \leq 0.2$; $0.00001 \leq y \leq 0.15$~~.

5-11. (canceled)

12. (currently amended) A process for producing the article of light-storage self-luminescent glass according to claim 1, comprising:

preparing the melted matrix glass by formulating, mixing, melting, homogenizing and clarifying the matrix glass, wherein the melted matrix glass is brought to a temperature of 900-1300°C; and

~~heating and melting the matrix glass;~~

doping the light-storage self-luminescent material into the melted matrix glass to produce a mixture; ~~and~~

~~forming the mixture at 900-1300°C~~.

13. (currently amended) A process for producing the article of light-storage self-luminescent glass, wherein the self-luminescent glass is the hollow glass article, according to claim [[1]] 12, further comprising:

blowing the melted matrix glass into a parison bubble using a blowing iron;

adding the light-storage self-luminescent material into the bubble from a mouth of the blowing iron such that the light-storage self-luminescent material is uniformly attached to the inner wall of the hollow glass article;

flashing, forming and sealing the bubble; and

shaping the article of light-storage self-luminescent glass

~~re-heating and melting a glass which has been formed and cooled; and~~

~~doping the glass with the light-storage self-luminescent material before secondary forming~~.

14-15. (canceled)

16. (currently amended) The article of ~~Light-storage~~ light-storage self-luminescent glass according claim 1, wherein said light-storage self luminescent material activated by multiple ions is selected from the group consisting of silicate, aluminate, sulfide, and any combination thereof and the matrix glass is selected from the group consisting of silicate glass, borate glass, phosphate glass, halide glass, sulfide glass and aluminate glass.

17. (canceled)

18. (currently amended) A process for producing the article of light-storage self-luminescent glass, wherein the self-luminescent glass is the laminated glass article, according to claim [[17]] 12, further comprising:

charging the melted matrix glass into a die, the charged melted matrix glass comprising a top surface;

spreading the light-storage self-luminescent material onto the top surface of the glass melt;

covering the charged melted matrix glass with an additional layer of melted matrix glass; and

pressing the covered charged melted matrix glass to form a pre-defined shape

~~heating and melting the matrix glass;~~

~~doping the light-storage self-luminescent material into the melted matrix glass to produce a mixture; and~~

~~forming the mixture at 900-1300°C~~.

19. (currently amended) A process for producing the article of light-storage self-luminescent glass,

wherein the self-luminescent glass is the stripped-luminescence glass article, according to claim [[17]] 12, further comprising:

preparing a glass tube, the glass tube having first and second ends;

sealing the first end of the glass tube;

filling the glass tube with the light-storage self-luminescent material;

sealing the second end of the glass tube;

placing the glass tube with both ends sealed onto a wiring die;

blowing the melted matrix glass into a parison bubble;

sticking the matrix glass parison bubble with the glass tuble filled with the light-storage self-luminescent material on the wiring die;

flashing the matrix glass parison bubble and the glass tube and blowing to form a pre-defined shape

~~re-heating and melting a glass which has been formed and cooled; and~~

~~doping the glass with the light-storage self-luminescent material before secondary forming~~.